PF-0595 USN

<110> INCYTE GENOMICS, INC.
TANG, Y. Tom; HILLMAN, Jennifer L.
YUE, Henry; ARVIZU, Chandra S.
BAUGHN, Mariah R.; BATRA, Sajeev

<120> HUMAN CHAPERONE PROTEINS

<130> PF-0595 USN

<140> US 09/787,678
<141> To Be Assigned

<150> PCT/US99/22027
<151> 1999-09-22

<150> US 60/183,022
<151> 1998-09-22

<150> US 09/158,642
<151> 1998-09-22

<150> US 09/294,698
<151> 1999-04-19

<150> US 60/172,232
<151> 1999-04-19

<150> US 09/233,291
<151> 1999-01-19

<150> US 60/172,216
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<213> Homo sapiens

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Pro His Gly Ser Thr Tyr Gln Met Arg Arg Pro Gly Gly Glu Leu
                 35                  40                  45
Pro Leu Ser Lys Ser Tyr Ser Ser Gly Asn Arg Lys Gly Phe Leu
                 50                  55                  60
Ser Gly Leu Leu Asp Asn Val Lys Gln Glu Leu Ala Lys Asn Lys
                 65                  70                  75
Glu Met Lys Glu Ser Ile Lys Lys Phe Arg Asp Glu Ala Arg Arg
                 80                  85                  90
Leu Glu Glu Ser Asp Val Leu Gln Glu Ala Arg Arg Lys Tyr Lys
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                    95                  100                 105
Thr Ile Glu Ser Glu Thr Val Arg Thr Ser Glu Val Leu Arg Lys
                   110                 115                 120
Lys Leu Gly Glu Leu Thr Gly Thr Val Lys Glu Ser Leu His Glu
                   125                 130                 135
Val Ser Lys Ser Asp Leu Gly Arg Lys Ile Lys Glu Gly Val Glu
                   140                 145                 150
Glu Ala Ala Lys Thr Ala Lys Gln Ser Ala Glu Ser Val Ser Lys
                   155                 160                 165
Gly Gly Glu Lys Leu Gly Arg Thr Ala Ala Phe Arg Ala Leu Ser
                   170                 175                 180
Gln Gly Val Glu Ser Val Lys Lys Glu Ile Asp Asp Ser Val Leu
                   185                 190                 195
Gly Gln Thr Gly Pro Tyr Arg Arg Pro Gln Arg Leu Arg Lys Arg
                   200                 205                 210
Thr Glu Phe Ala Gly Asp Lys Phe Lys Glu Glu Lys Val Phe Glu
                   215                 220                 225
Pro Asn Glu Glu Ala Leu Gly Val Val Leu His Lys Asp Ser Lys
                   230                 235                 240
Trp Tyr Gln Gln Trp Lys Asp Phe Lys Glu Asn Asn Val Val Phe
                   245                 250                 255
Asn Arg Phe Phe Glu Met Lys Met Lys Tyr Asp Glu Ser Asp Asn
                   260                 265                 270
Ala Phe Ile Arg Ala Ser Arg Ala Leu Thr Asp Lys Val Thr Asp
                   275                 280                 285
Leu Leu Gly Gly Leu Phe Ser Lys Thr Glu Met Ser Glu Val Leu
                   290                 295                 300
Thr Glu Ile Leu Arg Val Asp Pro Ala Phe Asp Lys Asp Arg Phe
                   305                 310                 315
Leu Lys Gln Cys Glu Asn Asp Ile Ile Pro Asn Val Leu Glu Ala
                   320                 325                 330
Met Ile Ser Gly Glu Leu Asp Ile Leu Lys Asp Trp Cys Tyr Glu
                   335                 340                 345
Ala Thr Tyr Ser Gln Leu Ala His Pro Ile Gln Gln Ala Lys Ala
                   350                 355                 360
Leu Gly Leu Gln Phe His Ser Arg Ile Leu Asp Ile Asp Asn Val
                   365                 370                 375
Asp Leu Ala Met Gly Lys Met Met Glu Gln Gly Pro Val Leu Ile
                   380                 385                 390
Ile Thr Phe Gln Ala Gln Leu Val Met Val Val Arg Asn Pro Lys
                   395                 400                 405
Gly Glu Val Val Glu Gly Asp Pro Asp Lys Val Leu Arg Met Leu
                   410                 415                 420
Tyr Val Trp Ala Leu Cys Arg Asp Gln Asp Glu Leu Asn Pro Tyr
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Ile Leu
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<210> 2
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<212> PRT
<213> Homo sapiens

<220>
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PF-0595 USN

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Leu Glu Lys Ala Gln Arg Leu Tyr Pro Thr Pro Arg Val Arg Ala
                 35                  40                  45
Leu Ile Glu Ser Leu Asn Gln Lys Pro Gln Thr Ala Gly Asp Gln
                 50                  55                  60
Pro Pro Pro Thr Asp Thr Thr His Ala Thr His Arg Lys Ala Gly
                 65                  70                  75
Gly Thr Asp Ala Pro Ser Ala Asn Gly Glu Ala Gly Gly Glu Ser
                 80                  85                  90
Thr Lys Gly Tyr Thr Ala Glu Gln Val Ala Ala Val Lys Arg Val
                 95                 100                 105
Lys Gln Cys Lys Asp Tyr Tyr Glu Ile Leu Gly Val Ser Arg Gly
                110                 115                 120
Ala Ser Asp Glu Asp Leu Lys Lys Ala Tyr Arg Arg Leu Ala Leu
                125                 130                 135
Lys Phe His Pro Asp Lys Asn His Ala Pro Gly Ala Thr Glu Ala
                140                 145                 150
Phe Lys Ala Ile Gly Thr Ala Tyr Ala Val Leu Ser Asn Pro Glu
                155                 160                 165
Lys Arg Lys Gln Tyr Asp Gln Phe Gly Asp Asp Lys Ser Gln Ala
                170                 175                 180
Ala Arg His Gly His Gly His Gly Asp Phe His Arg Gly Phe Glu
                185                 190                 195
Ala Asp Ile Ser Pro Glu Asp Leu Phe Asn Met Phe Phe Gly Gly
                200                 205                 210
Gly Phe Pro Ser Ser Asn Val His Val Tyr Ser Asn Gly Arg Met
                215                 220                 225
Arg Tyr Thr Tyr Gln Gln Arg Gln Asp Arg Arg Asp Asn Gln Gly
                230                 235                 240
Asp Gly Gly Leu Gly Val Phe Val Gln Leu Met Pro Ile Leu Ile
                245                 250                 255
Leu Ile Leu Val Ser Ala Leu Ser Gln Leu Met Val Ser Ser Pro
                260                 265                 270
Pro Tyr Ser Leu Ser Pro Arg Pro Ser Val Gly His Ile His Arg
                275                 280                 285
Arg Val Thr Asp His Leu Gly Val Val Tyr Tyr Val Gly Asp Thr
                290                 295                 300
Phe Ser Glu Glu Tyr Thr Gly Ser Ser Leu Lys Thr Val Glu Arg
                305                 310                 315
Asn Val Glu Asp Asp Tyr Ile Ala Asn Leu Arg Asn Asn Cys Trp
                320                 325                 330
Lys Glu Lys Gln Gln Lys Glu Gly Leu Leu Tyr Arg Ala Arg Tyr
                335                 340                 345
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<220>

PF-0595 USN

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35 40 45
Ser Glu Asp Pro Pro Asp Glu Leu Gly Pro Pro Leu Ala Glu Arg
50 55 60
Ala Leu Arg Val Lys Ala Val Lys Leu Glu Lys Glu Val Gln Asp
65 70 75
Leu Thr Val Arg Tyr Gln Arg Ala Ile Ala Asp Cys Glu Asn Ile
80 85 90
Arg Arg Arg Thr Gln Arg Cys Val Glu Asp Ala Lys Ile Phe Gly
95 100 105
Ile Gln Ser Phe Cys Lys Asp Leu Val Glu Val Ala Asp Ile Leu
110 115 120
Glu Lys Thr Thr Glu Cys Ile Ser Glu Glu Ser Glu Pro Glu Asp
125 130 135
Gln Lys Leu Thr Leu Glu Lys Val Phe Arg Gly Leu Leu Leu Leu
140 145 150
Glu Ala Lys Leu Lys Ser Val Phe Ala Lys His Gly Leu Glu Lys
155 160 165
Leu Thr Pro Ile Gly Asp Lys Tyr Asp Pro His Glu His Glu Leu
170 175 180
Ile Cys His Val Pro Ala Gly Val Gly Val Gln Pro Gly Thr Val
185 190 195
Ala Leu Val Arg Gln Asp Gly Tyr Lys Leu His Gly Arg Thr Ile
200 205 210
Arg Leu Ala Arg Val Glu Val Ala Val Glu Ser Gln Arg Arg Leu
215 220 225

<210> 4
<211> 304
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 4217610CD1

<400> 4
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Ser Asp Glu Asp Ile Lys Lys Ala Tyr Arg Lys Gln Ala Leu Lys
20 25 30
Phe His Pro Asp Lys Asn Lys Ser Pro Gln Ala Glu Glu Lys Phe
35 40 45
Lys Glu Val Ala Glu Ala Tyr Glu Val Leu Ser Asp Pro Lys Lys
50 55 60
Arg Glu Ile Tyr Asp Gln Phe Gly Glu Glu Gly Leu Lys Gly Gly
65 70 75
Ala Gly Gly Thr Asp Gly Gln Gly Gly Thr Phe Arg Tyr Thr Phe
80 85 90
His Gly Asp Pro His Ala Thr Phe Ala Ala Phe Phe Gly Gly Ser

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                  95                  100                 105
Asn Pro Phe Glu Ile Phe Phe Gly Arg Arg Met Gly Gly Gly Arg
                 110                 115                 120
Asp Ser Glu Glu Met Glu Ile Asp Gly Asp Pro Phe Ser Ala Phe
                 125                 130                 135
Gly Phe Ser Met Asn Gly Tyr Pro Arg Asp Arg Asn Ser Val Gly
                 140                 145                 150
Pro Ser Arg Leu Lys Gln Asp Pro Pro Val Ile His Glu Leu Arg
                 155                 160                 165
Val Ser Leu Glu Glu Ile Tyr Ser Gly Cys Thr Lys Arg Met Lys
                 170                 175                 180
Ile Ser Arg Lys Arg Leu Asn Ala Asp Gly Arg Ser Tyr Arg Ser
                 185                 190                 195
Glu Asp Lys Ile Leu Thr Ile Glu Ile Lys Lys Gly Trp Lys Glu
                 200                 205                 210
Gly Thr Lys Ile Thr Phe Pro Arg Glu Gly Asp Glu Thr Pro Asn
                 215                 220                 225
Ser Ile Pro Ala Asp Ile Val Phe Ile Ile Lys Asp Lys Asp His
                 230                 235                 240
Pro Lys Phe Lys Arg Asp Gly Ser Asn Ile Ile Tyr Thr Ala Lys
                 245                 250                 255
Ile Ser Leu Arg Glu Ala Leu Cys Gly Cys Ser Ile Asn Val Pro
                 260                 265                 270
Thr Leu Asp Gly Arg Asn Ile Pro Met Ser Val Asn Asp Ile Val
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Arg Ile Val Thr Ser Cys Tyr Gly Pro Ser Gly Arg Leu Lys Gln
                 35                  40                  45
Leu His Asn Gly Phe Gly Gly Tyr Val Cys Thr Thr Ser Gln Ser
                 50                  55                  60
Ser Ala Leu Leu Ser His Leu Leu Val Thr His Pro Ile Leu Lys
                 65                  70                  75
Ile Leu Thr Ala Ser Ile Gln Asn His Val Ser Ser Phe Ser Asp
                 80                  85                  90
Cys Gly Leu Phe Thr Ala Ile Leu Cys Cys Asn Leu Ile Glu Asn
                 95                 100                 105
Val Gln Arg Leu Gly Leu Thr Pro Thr Thr Val Ile Arg Leu Asn
                110                 115                 120
Lys His Leu Leu Ser Leu Cys Ile Ser Tyr Leu Lys Ser Glu Thr
                125                 130                 135
Cys Gly Cys Arg Ile Pro Val Asp Phe Ser Ser Thr Gln Ile Leu
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                140                 145                 150
Leu Cys Leu Val Arg Ser Ile Leu Thr Ser Lys Pro Ala Cys Met
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Leu Thr Arg Lys Glu Thr Glu His Val Ser Ala Leu Ile Leu Arg
                170                 175                 180
Ala Phe Leu Leu Thr Ile Pro Glu Asn Ala Glu Gly His Ile Ile
                185                 190                 195
Leu Gly Lys Ser Leu Ile Val Pro Leu Lys Gly Gln Arg Val Ile
                200                 205                 210
Asp Ser Thr Val Leu Pro Gly Ile Leu Ile Glu Met Ser Glu Val
                215                 220                 225
Gln Leu Met Arg Leu Leu Pro Ile Lys Lys Ser Thr Ala Leu Lys
                230                 235                 240
Val Ala Leu Phe Cys Thr Thr Leu Ser Gly Asp Thr Ser Asp Thr
                245                 250                 255
Gly Glu Gly Thr Val Val Val Ser Tyr Gly Val Ser Leu Glu Asn
                260                 265                 270
Ala Val Leu Asp Gln Leu Leu Asn Leu Gly Arg Gln Leu Ile Ser
                275                 280                 285
Asp His Val Asp Leu Val Leu Cys Gln Lys Val Ile His Pro Ser
                290                 295                 300
Leu Lys Gln Phe Leu Asn Met His Arg Ile Ile Ala Ile Asp Arg
                305                 310                 315
Ile Gly Val Thr Leu Met Glu Pro Leu Thr Lys Met Thr Gly Thr
                320                 325                 330
Gln Pro Ile Gly Ser Leu Gly Ser Ile Cys Pro Asn Ser Tyr Gly
                335                 340                 345
Ser Val Lys Asp Val Cys Thr Ala Lys Phe Gly Ser Lys His Phe
                350                 355                 360
Phe His Leu Ile Pro Asn Glu Ala Thr Ile Cys Ser Leu Leu Leu
                365                 370                 375
Cys Asn Arg Asn Asp Thr Ala Trp Asp Glu Leu Lys Leu Thr Cys
                380                 385                 390
Gln Thr Ala Leu His Val Leu Gln Leu Thr Leu Lys Glu Pro Trp
                395                 400                 405
Ala Leu Leu Gly Gly Gly Cys Thr Glu Thr His Leu Ala Ala Tyr
                410                 415                 420
Ile Arg His Lys Thr His Asn Asp Pro Glu Ser Ile Leu Lys Asp
                425                 430                 435
Asp Glu Cys Thr Gln Thr Glu Leu Gln Leu Ile Ala Glu Ala Phe
                440                 445                 450
Cys Ser Ala Leu Glu Ser Val Val Gly Ser Leu Glu His Asp Gly
                455                 460                 465
Gly Glu Ile Leu Thr Asp Met Lys Tyr Gly His Leu Trp Ser Val
                470                 475                 480
Gln Ala Asp Ser Pro Cys Val Ala Asn Trp Pro Asp Leu Leu Ser
                485                 490                 495
Gln Cys Gly Cys Gly Leu Tyr Asn Ser Gln Glu Glu Leu Asn Trp
                500                 505                 510
Ser Phe Leu Arg Ser Thr Arg Arg Pro Phe Val Pro Gln Ser Cys
                515                 520                 525
Leu Pro His Glu Ala Val Gly Ser Ala Ser Asn Leu Thr Leu Asp
                530                 535                 540
Cys Leu Thr Ala Lys Leu Ser Gly Leu Gln Val Ala Val Glu Thr
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<210> 6
<211> 559
<212> PRT
<213> Homo sapiens

<220>
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Lys Ala Ala Tyr Arg Arg Leu Cys Met Leu Tyr His Pro Asp Lys
35 40 45
His Arg Asp Pro Glu Leu Lys Ser Gln Ala Glu Arg Leu Phe Asn
50 55 60
Leu Val His Gln Ala Tyr Glu Val Leu Ser Asp Pro Gln Thr Arg
65 70 75
Ala Ile Tyr Asp Ile Tyr Gly Lys Arg Gly Leu Glu Met Glu Gly
80 85 90
Trp Glu Val Val Glu Arg Arg Arg Thr Pro Ala Glu Ile Arg Glu
95 100 105
Glu Phe Glu Arg Leu Gln Arg Glu Arg Glu Glu Arg Arg Leu Gln
110 115 120
Gln Arg Thr Asn Pro Lys Gly Thr Ile Ser Val Gly Val Asp Ala
125 130 135
Thr Asp Leu Phe Asp Arg Tyr Asp Glu Glu Tyr Glu Asp Val Ser
140 145 150
Gly Ser Ser Phe Pro Gln Ile Glu Ile Asn Lys Met His Ile Ser
155 160 165
Gln Ser Ile Glu Ala Pro Leu Thr Ala Thr Asp Thr Ala Ile Leu
170 175 180
Ser Gly Ser Leu Ser Thr Gln Asn Gly Asn Gly Gly Gly Ser Ile
185 190 195
Asn Phe Ala Leu Arg Arg Val Thr Ser Ala Lys Gly Trp Gly Glu
200 205 210
Leu Glu Phe Gly Ala Gly Asp Leu Gln Gly Pro Leu Phe Gly Leu
215 220 225
Lys Leu Phe Arg Asn Leu Thr Pro Arg Cys Phe Val Thr Thr Asn
230 235 240
Cys Ala Leu Gln Phe Ser Ser Arg Gly Ile Arg Pro Gly Leu Thr
245 250 255
Thr Val Leu Ala Arg Asn Leu Asp Lys Asn Thr Val Gly Tyr Leu
260 265 270
Gln Trp Arg Trp Gly Ile Gln Ser Ala Met Asn Thr Ser Ile Val
275 280 285
Arg Asp Thr Lys Thr Ser His Phe Thr Val Ala Leu Gln Leu Gly
290 295 300
Ile Pro His Ser Phe Ala Leu Ile Ser Tyr Gln His Lys Phe Gln
305 310 315
Asp Asp Asp Gln Thr Arg Val Lys Gly Ser Leu Lys Ala Gly Phe
320 325 330
Phe Gly Thr Val Val Glu Tyr Gly Ala Glu Arg Lys Ile Ser Arg
335 340 345
His Ser Val Leu Gly Ala Ala Val Ser Val Gly Val Pro Gln Gly
350 355 360
Val Ser Leu Lys Val Lys Leu Asn Arg Ala Ser Gln Thr Tyr Phe

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                365                 370                 375
Phe Pro Ile His Leu Thr Asp Gln Leu Leu Pro Ser Ala Met Phe
                380                 385                 390
Tyr Ala Thr Val Gly Pro Leu Val Val Tyr Phe Ala Met His Arg
                395                 400                 405
Leu Ile Ile Lys Pro Tyr Leu Arg Ala Gln Lys Glu Lys Glu Leu
                410                 415                 420
Glu Lys Gln Arg Glu Ser Ala Ala Thr Asp Val Leu Gln Lys Lys
                425                 430                 435
Gln Glu Ala Glu Ser Ala Val Arg Leu Met Gln Glu Ser Val Arg
                440                 445                 450
Arg Ile Ile Glu Ala Glu Glu Ser Arg Met Gly Leu Ile Ile Val
                455                 460                 465
Asn Ala Trp Tyr Gly Lys Phe Val Asn Asp Lys Ser Arg Lys Ser
                470                 475                 480
Glu Lys Val Lys Val Ile Asp Val Thr Val Pro Leu Gln Cys Leu
                485                 490                 495
Val Lys Asp Ser Lys Leu Ile Leu Thr Glu Ala Ser Lys Ala Gly
                500                 505                 510
Leu Pro Gly Phe Tyr Asp Pro Cys Val Gly Glu Glu Lys Asn Leu
                515                 520                 525
Lys Val Leu Tyr Gln Phe Arg Gly Val Leu His Gln Val Met Val
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<212> DNA
<213> Homo sapiens

<220>
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aagatgatgg agcaggggcc ggtgctgatc atcaccttcc aggcacagct ggtgatggtg 1260
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<210> 8
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<212> DNA
<213> Homo sapiens

<220>
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<223> Incyte ID No: 2373576CB1

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cctggagaag gcacagcggc tgtatccgac gccgcgagtt cgcgccctga ttgagtccct 180
caaccagaaa ccacagactg ccggtgacca acccccaccc acagacacaa cccatgccac 240
ccacaggaaa gcaggtggga ccgatgcccc ctcggccaac ggtgaagctg gaggagagag 300
caccaaaggc tacactgcag aacaggttgc agctgtgaaa agggtcaagc aatgtaaaga 360
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ccaccgtggc tttgaggccg acatctcccc tgaagacctc ttcaacatgt tctttggcgg 660
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tatagatgcg tgtatatgta tatatatcta tttatatgta aataggcata tatgaagata 1680
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<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
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ggaagacgcc aagatatttg gaatccagag tttctgtaag gacttggtgg aggtggctga 360
cattttggag aagactacag agtgcatttc tgaagaatcg gagcctgagg accaaaagct 420
cactctggag aaggtcttcc gagggttgtt gcttttagaa gcaaagctga aaagtgtgtt 480
tgccaagcat ggcctggaga aactgacacc cattggtgac aaatatgacc cccatgagca 540
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<210> 10
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<213> Homo sapiens

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<223> a, t, c, g, or other

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<210> 11

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<211> 2776
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1977820CB1

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<210> 12
<211> 3213

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<212> DNA
<213> Homo sapiens

<220>
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<223> Incyte ID No: 2722589CB1

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<210> 13
<211> 215
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1556139H1

<220>
<221> unsure
<222> 25, 27
<223> a, t, c, g, or other

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ggaatccaat ttctttccag ccacaaccta ccccatgggt cgacctatca gatgcgccgg 180
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<210> 14
<211> 592
<212> DNA
<213> Homo sapiens

<220>
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<223> Incyte ID No: 1594241F1

<220>
<221> unsure
<222> 480, 489, 498, 503, 507, 518, 553, 576, 580
<223> a, t, c, g, or other

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ggcgtggang aagcagcnaa ganggcnaag cagtcggncg agtcgtattc caaaggcggg 540
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<210> 15
<211> 296
<212> DNA
<213> Homo sapiens

<220>
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<220>
<221> unsure
<222> 5, 46, 69, 73, 113, 126, 248, 257
<223> a, t, c, g, or other

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gaggaagcag ccaagacggc caagcagtcg gccgagtcgg tatccaaagg cggggagaag 240
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<210> 16
<211> 571
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 865064R1

<220>
<221> unsure
<222> 567
<223> a, t, c, g, or other

<400> 16
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tcgacctggc catgggcaag atgatgnagc g 571

<210> 17
<211> 563
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1469448F1

<220>
<221> unsure
<222> 411, 437, 502, 533, 535, 547
<223> a, t, c, g, or other

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<210> 18
<211> 329
<212> DNA
<213> Homo sapiens

<220>
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cggtgcctct gtgcctgatg acccaggccg gggctacctg gctccggcac cacactcaga 180
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<210> 19
<211> 215
<212> DNA
<213> Homo sapiens

<220>
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<220>
<221> unsure
<222> 25, 27
<223> a, t, c, g, or other

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<210> 20
<211> 592
<212> DNA
<213> Homo sapiens

<220>
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<223> Incyte ID No: 1594241F1

<220>
<221> unsure
<222> 480, 489, 498, 503, 507, 518, 553, 576, 580
<223> a, t, c, g, or other

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<210> 21
<211> 296
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
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<220>
<221> unsure
<222> 5, 46, 59, 73, 113, 126, 248, 257
<223> a, t, c, g, or other

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<210> 22
<211> 571
<212> DNA
<213> Homo sapiens

<220>
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<223> Incyte ID No: 865064R1

<220>
<221> unsure
<222> 567
<223> a, t, c, g, or other

<400> 22
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ttctgaaaca gtgcgagaac gacatcatcc ccaatgtcct ggaggccatg atttctggag 420
agcttgacat tctcaaagac tggtgctatg aagctactta cagccagctg gcccacccca 480
tccagcaggc caaggcactg ggtctccagt tccattctcg catcctagac attgacaacg 540
tcgacctggc catgggcaag atgatgnagc g 571

<210> 23
<211> 563
<212> DNA

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<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1469448F1

<220>
<221> unsure
<222> 411, 437, 502, 533, 535, 547
<223> a, t, c, g, or other

<400> 23
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cggagatcct ccgggtggac ccggcctttg acaaggaccg gtttctgaaa cagtgcgaga 120
acgacatcat ccccaatgtc ctggaggcca tgatttctgg agagcttgac attctcaaag 180
actggtgcta tgaagctact tacagccagc tggcccaccc catccagcag gccaaggcac 240
tgggtctcca gttccattct cgcatcctag acattgacaa cgtcgacctg gccatgggca 300
agatgatgga gcaggggccg gtgctgatca tcaccttcca ggcacagctg gtgatggtgg 360
tcaggaaccc caaaggcgag gtggtggagg gtgacccgga caaggtgtgc ngatgctgta 420
cgtgtgggcg ctctgcngag acaggacgag tcaaccccta cgcggcctgg cggctcctgg 480
acatctcggc ctccagcacc gngaaattct cttgaattgt ggtgccggag cangntagcc 540
ccggctnggg tatcaggcaa aaa 563

<210> 24
<211> 329
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1576728T1

<400> 24
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cggtgcctct gtgcctgatg acccaggccg gggctacctg gctccggcac cacactcaga 180
gaatctgctc ggtgctggag gccgagatgt ccaggagccg ccaggccgcg taggggttga 240
gctcgtcctg gtctcggcag agcgcccaca cgtacagcat ccgcagcacc ttgtccgggt 300
cacctccaac aactcgcttt ggggttcgg 329

<210> 25
<211> 452
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> GenBank ID No: g2351410

<400> 25
Met Ala Ala Ala Arg Leu Arg Gly Gly Trp Cys Arg Cys Pro Arg
1 5 10 15
Arg Cys Leu Gly Ser Gly Ile Gln Phe Leu Ser Ser His Asn Leu
20 25 30
Pro His Gly Ser Ser Tyr Gln Ile Ser Arg Pro Gly Arg Glu Leu
35 40 45
Thr Leu Thr Lys Ser Tyr Ser Ser Gly Ser Arg Lys Gly Phe Leu
50 55 60
Ser Gly Leu Leu Asp Asn Ile Lys Gln Glu Leu Ala Lys Asn Lys

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                    65                  70                  75
Glu Met Lys Glu Ser Ile Lys Lys Phe Arg Asp Glu Ala Lys Lys
                    80                  85                  90
Leu Glu Glu Ser Asp Ala Leu Gln Glu Ala Arg Arg Lys Tyr Lys
                    95                 100                 105
Ser Ile Glu Ser Glu Thr Val Arg Thr Ser Glu Ala Ile Lys Lys
                   110                 115                 120
Lys Leu Gly Glu Leu Thr Gly Thr Val Lys Glu Ser Leu Asp Glu
                   125                 130                 135
Val Ser Lys Ser Asp Leu Gly Arg Lys Ile Lys Glu Gly Val Glu
                   140                 145                 150
Glu Ala Ala Arg Thr Ala Lys Gln Ser Ala Glu Ser Val Ser Lys
                   155                 160                 165
Ser Gly Glu Lys Leu Gly Lys Thr Ala Ala Phe Lys Ala Ile Ser
                   170                 175                 180
Gln Gly Val Glu Ser Val Lys Lys Glu Leu Asp Glu Ser Val Leu
                   185                 190                 195
Gly Gln Thr Gly Pro Tyr Arg Arg Pro Glu Arg Leu Arg Lys Arg
                   200                 205                 210
Thr Glu Phe Ala Gly Ala Lys Phe Lys Glu Ser Lys Val Phe Glu
                   215                 220                 225
Ala Asn Glu Glu Ala Leu Gly Val Val Leu His Lys Asp Ser Lys
                   230                 235                 240
Trp Tyr Gln Gln Trp Lys Asp Phe Lys Asp Asn Asn Val Val Phe
                   245                 250                 255
Asn Arg Phe Phe Glu Met Lys Met Lys Tyr Asp Glu Ser Asp Asn
                   260                 265                 270
Val Leu Ile Arg Ala Ser Arg Ala Leu Thr Asp Lys Val Thr Asp
                   275                 280                 285
Leu Leu Gly Gly Leu Phe Ser Lys Thr Glu Met Ser Glu Val Leu
                   290                 295                 300
Thr Glu Ile Leu Arg Val Asp Pro Thr Phe Asp Lys Asp His Phe
                   305                 310                 315
Leu His Gln Cys Glu Thr Asp Ile Ile Pro Asn Ile Leu Glu Ala
                   320                 325                 330
Met Ile Ser Gly Glu Leu Asp Ile Leu Lys Asp Trp Cys Tyr Glu
                   335                 340                 345
Ala Thr Tyr Ser Gln Leu Ala His Pro Ile Gln Gln Ala Lys Ala
                   350                 355                 360
Leu Gly Phe Gln Phe His Ser Arg Ile Leu Asp Ile Ser Asn Val
                   365                 370                 375
Asp Leu Ala Met Gly Lys Met Met Glu Gln Gly Pro Val Leu Ile
                   380                 385                 390
Val Thr Phe Gln Ala Gln Val Val Met Val Ile Lys Asn Ser Lys
                   395                 400                 405
Gly Glu Val Tyr Asp Gly Asp Pro Asp Lys Val Gln Arg Met Leu
                   410                 415                 420
Tyr Val Trp Ala Leu Cys Arg Asp Gln Glu Glu Leu Asn Pro Tyr
                   425                 430                 435
Ala Ala Trp Arg Leu Leu Asp Ile Ser Ala Ser Ser Thr Glu Gln
                   440                 445                 450
Ile Leu
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<210> 26
<211> 223
<212> PRT
<213> Homo sapiens

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<220>
<221> misc_feature
<223> GenBank ID No: g3411072

<400> 26
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Ala Ser Gly Ala Met Ser Glu Ser Arg Gly Trp Leu His Pro Phe
20 25 30
Ser Thr Ala Thr Gln Arg Thr Ala Gly Glu Asp Cys Ser Ser Glu
35 40 45
Asp Pro Pro Asp Gly Leu Gly Pro Ser Leu Ala Glu Gln Ala Leu
50 55 60
Arg Leu Lys Ala Val Lys Leu Glu Lys Glu Val Gln Asp Leu Thr
65 70 75
Leu Arg Tyr Gln Arg Ala Val Ala Asp Cys Glu Asn Ile Arg Arg
80 85 90
Arg Thr Gln Arg Cys Val Glu Asp Ala Lys Ile Phe Gly Ile Gln
95 100 105
Ser Phe Cys Lys Asp Leu Val Glu Val Ala Asp Ile Leu Glu Lys
110 115 120
Thr Ala Lys Cys Cys Ser Glu Gly Ala Glu Pro Glu Asp His Arg
125 130 135
Arg Thr Leu Glu Lys Val Phe Gln Gly Leu Ser Leu Leu Glu Ala
140 145 150
Arg Leu Lys Ser Val Phe Thr Lys His Gly Leu Glu Lys Met Thr
155 160 165
Pro Ile Gly Asp Lys Tyr Asp Pro His Glu His Glu Leu Ile Cys
170 175 180
His Met Pro Ala Gly Val Gly Val Gln Pro Gly Thr Val Ala Leu
185 190 195
Val Arg Gln Asp Gly Tyr Lys Leu His Gly Arg Thr Ile Arg Leu
200 205 210
Ala Gln Val Glu Val Ala Val Glu Ser Gln Arg Arg Leu
215 220

<210> 27
<211> 340
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
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<400> 27
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Ser Asp Glu Glu Ile Lys Arg Ala Tyr Arg Arg Gln Ala Leu Arg
20 25 30
Tyr His Pro Asp Lys Asn Lys Glu Pro Gly Ala Glu Glu Lys Phe
35 40 45
Lys Glu Ile Ala Glu Ala Tyr Asp Val Leu Ser Asp Pro Arg Lys
50 55 60
Arg Glu Ile Phe Asp Arg Tyr Gly Glu Glu Gly Leu Lys Gly Ser
65 70 75
Gly Pro Ser Gly Gly Ser Gly Gly Gly Ala Asn Gly Thr Ser Phe
80 85 90
Ser Tyr Thr Phe His Gly Asp Pro His Ala Met Phe Ala Glu Phe

95 100 105
Phe Gly Gly Arg Asn Pro Phe Asp Thr Phe Phe Gly Gln Arg Asn
110 115 120
Gly Glu Glu Gly Met Asp Ile Asp Asp Pro Phe Ser Gly Phe Pro
125 130 135
Met Gly Met Gly Gly Phe Thr Asn Val Asn Phe Gly Arg Ser Arg
140 145 150
Ser Ala Gln Glu Pro Ala Arg Lys Lys Gln Asp Pro Pro Val Thr
155 160 165
His Asp Leu Arg Val Ser Leu Glu Glu Ile Tyr Ser Gly Cys Thr
170 175 180
Lys Lys Met Lys Ile Ser His Lys Arg Leu Asn Pro Asp Gly Lys
185 190 195
Ser Ile Arg Asn Glu Asp Lys Ile Leu Thr Ile Glu Val Lys Lys
200 205 210
Gly Trp Lys Glu Gly Thr Lys Ile Thr Phe Pro Lys Glu Gly Asp
215 220 225
Glu Thr Ser Asn Asn Ile Pro Ala Asp Ile Val Phe Val Leu Lys
230 235 240
Asp Lys Pro His Asn Ile Phe Lys Arg Asp Gly Ser Asp Val Ile
245 250 255
Tyr Pro Ala Arg Ile Ser Leu Arg Glu Ala Leu Cys Gly Cys Thr
260 265 270
Val Asn Val Pro Thr Leu Asp Gly Arg Thr Ile Pro Val Val Phe
275 280 285
Lys Asp Val Ile Arg Pro Gly Met Arg Arg Lys Val Pro Gly Glu
290 295 300
Gly Leu Pro Leu Pro Lys Thr Pro Glu Lys Arg Gly Asp Leu Ile
305 310 315
Ile Glu Phe Glu Val Ile Phe Pro Glu Arg Ile Pro Gln Thr Ser
320 325 330
Arg Thr Val Leu Glu Gln Val Leu Pro Ile
335 340